

Emergency Response and Protecting Infrastructure Workers: Training At-Risk Sectors in Emergency Response

By
Paul Penn
EnMachine



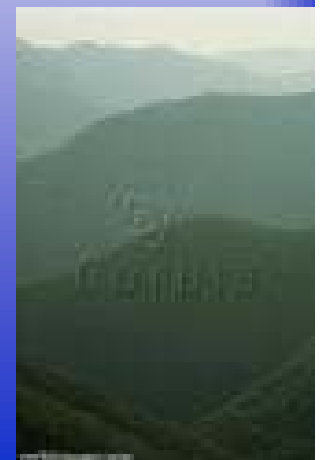
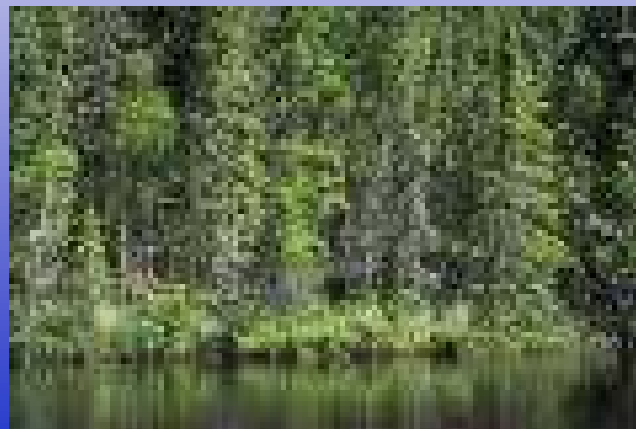
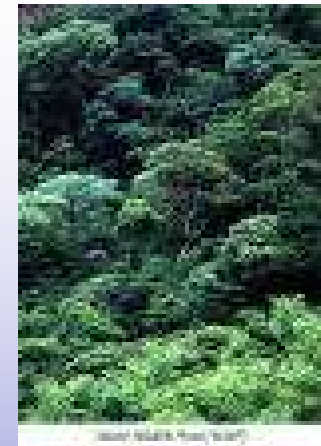
National Institute of Environmental Health Sciences

Division of Extramural Research and Training

Worker Education and Training Program



Chip wanted forest



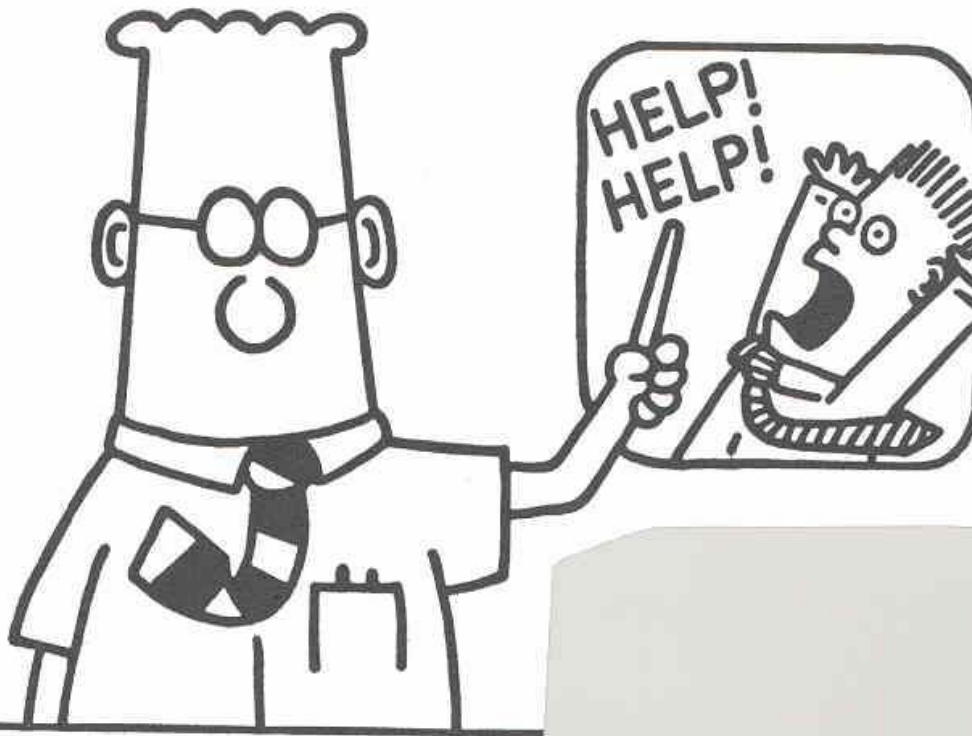
Not trees



And Definitely not a...

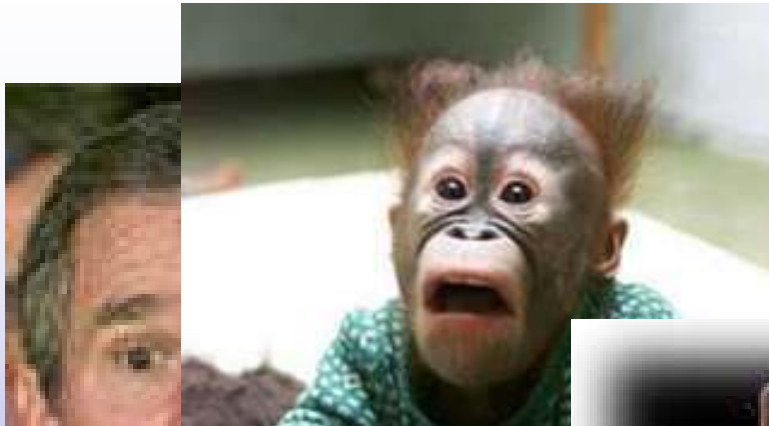


Our Disaster Recovery Plan Goes Something Like This...



DILBERT
By Scott Adams

Today's intent-
to avoid looking like this:



When this happens!



Managing Incidents

- Big changes comin' down the 'pike.
 - HSPD (Homeland Security Presidential Directive-5)
 - One-eyed NIMS
 - NRP

HSPD-5: *Management of Domestic Incidents*

- Single, comprehensive approach to domestic incident management
- Applicable to terrorist attacks, major disasters and other emergencies
- Foster coordination across all levels of gov'n't and promote partnerships with private sector and NGOs
- Crisis and consequence management treated as a single, integrated function

HSPD-5 Tasking

- Develop and administer a National Incident Management System (NIMS)
 - Provide a consistent, all-hazards, nationwide approach
 - Provide assistance to state and local govns in developing all-hazards plans and capabilities
 - Foster Federal, state and local govnt interoperability and compatibility
- Include a core set of concepts, principles, and terminology for incident command; multi-agency coordination; unified command; training; identification/management of resources; qualifications and certifications; incident reporting

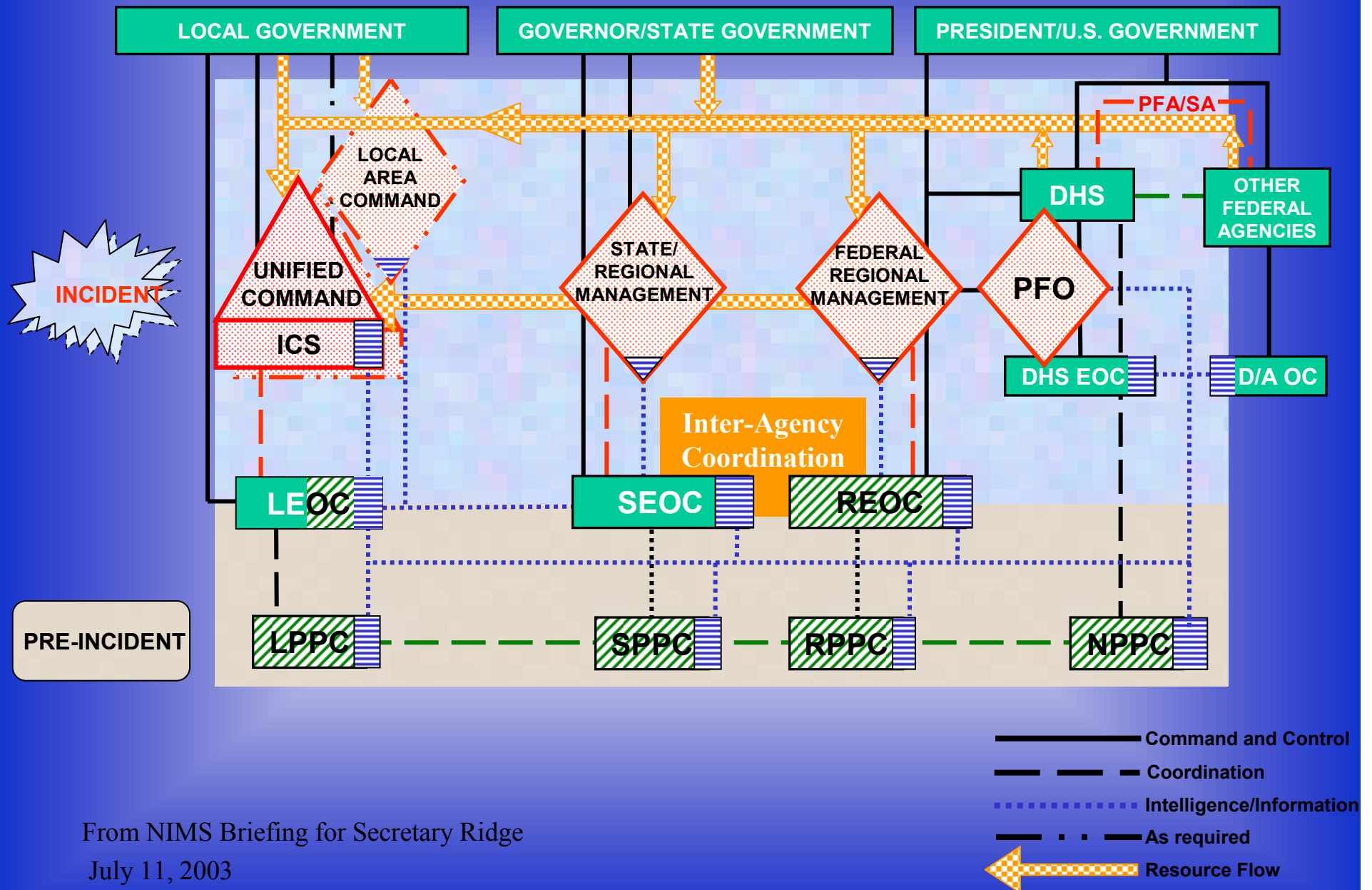
From DHS HSPD-5 Implementation Plan Overview Briefing

September 25, 2003

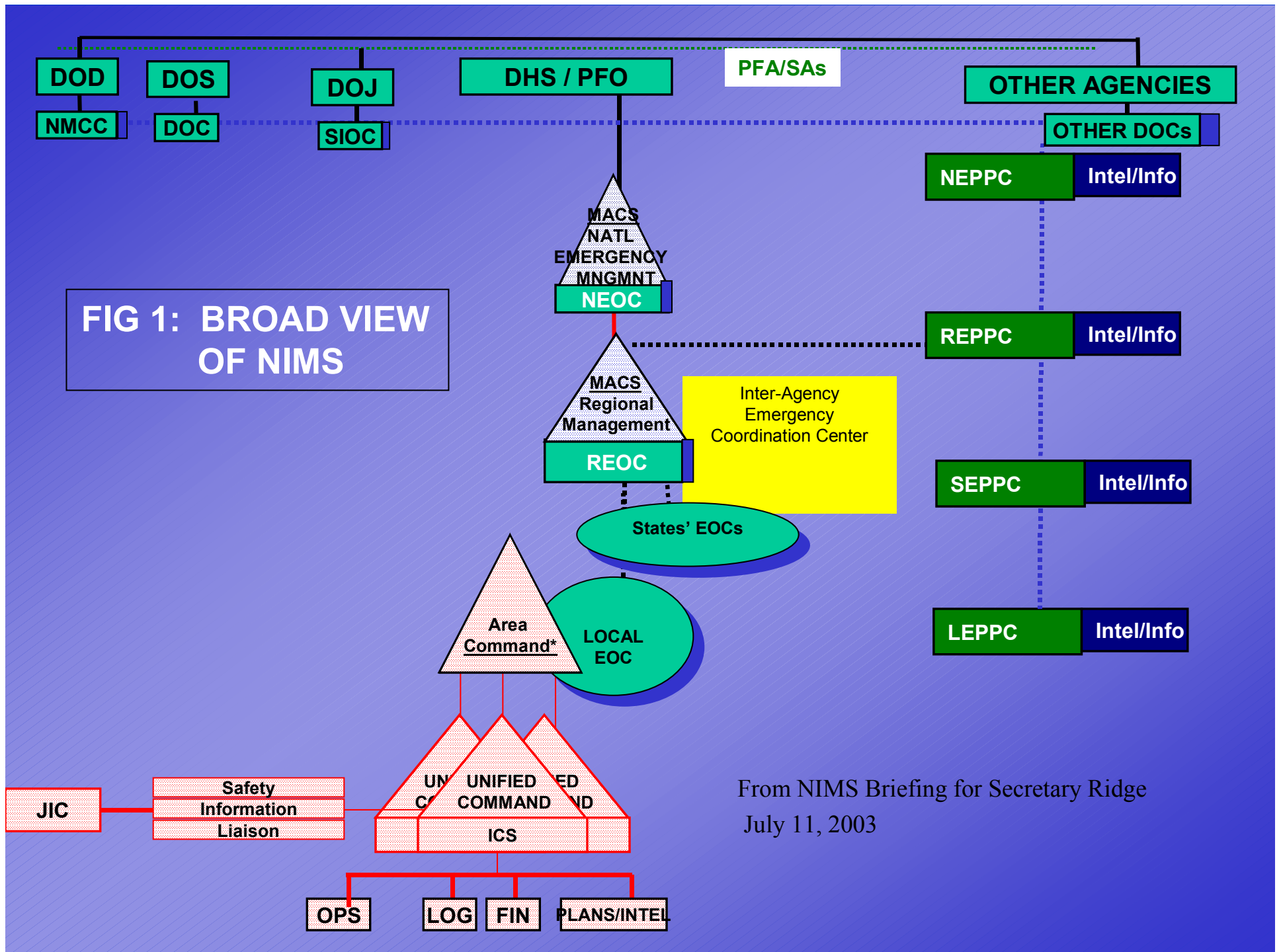
Core NIMS Requirements

- Command and Management
 - ICS, Unified Command, Multi-agency Coordination
- Resource Management Systems
 - Pre-post Event
- System Preparedness
 - Training, Quals/Certifications, Pubs Management
- Communications, Intel, and Info Management
 - Common Operating Picture
- Science and Technology
 - Requirements Solutions

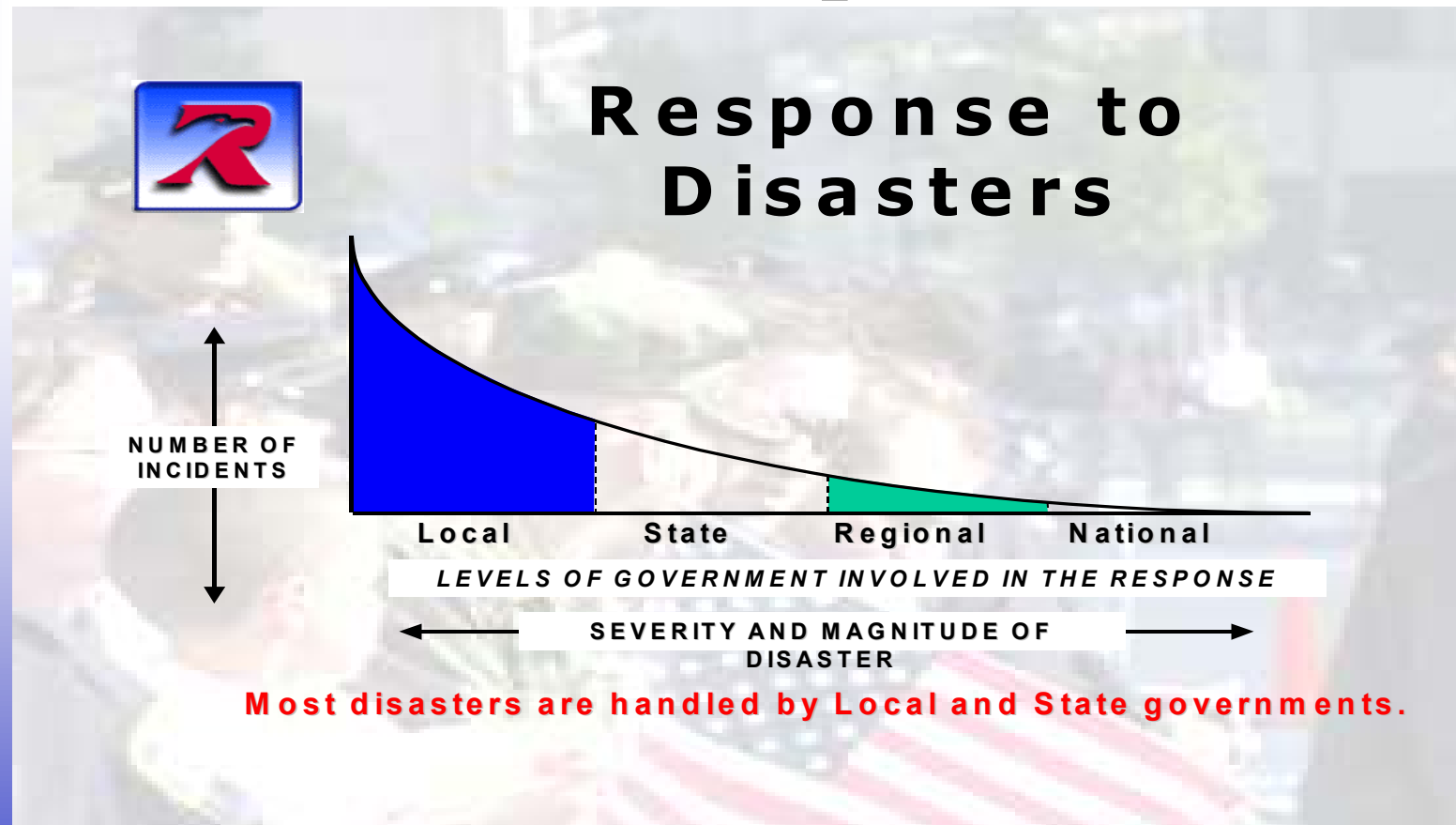
FIG 1: BROAD VIEW OF NIMS



From NIMS Briefing for Secretary Ridge
July 11, 2003



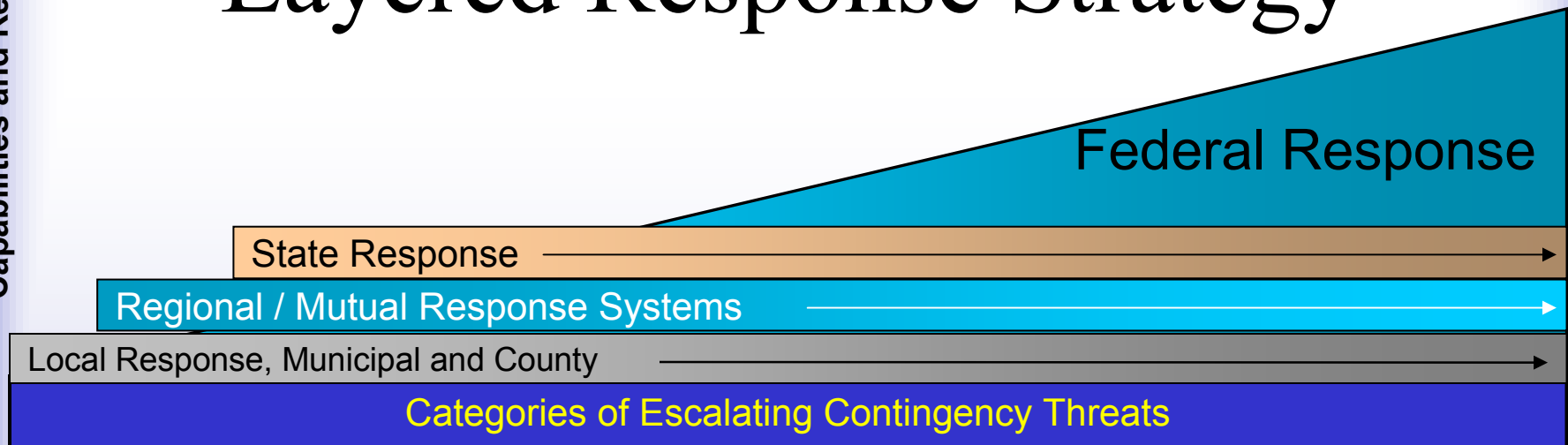
Incident Spectrum



From DHS The Road Ahead National Response Plan National Incident Management System RD, FCO & RR Conference 18 November 2003

Layered Response Strategy

Capabilities and Resources



MINIMAL	LOW	MEDIUM	HIGH	CATASTROPHIC
Tornado	Ice Storm	Flood	CAT 3 - 4 Hurricane	LA Earthquake / New Orleans CAT 5 Hurricane
Influenza, food borne illnesses, endemic plague	Anthrax, plague with 1-2 cases	Pandemic Influenza	Smallpox	Bio-Engineered Agent
Traffic Accident	HAZMAT Spill	Aircraft Crash	Dam Break	Nuclear Plant Significant Incident

From DHS The Road Ahead National Response Plan National Incident Management System RD, FCO & RR Conference 18 November 2003

A Tiered Approach to Training

Hospital Personnel

16 hrs
Total
40 hrs

Technician

16 hrs
Total
40 hrs

Gatekeeper
/Intervener

8 hrs
Total
24 hrs

Incident Commander /Safety/
Technical Reference

12 hrs
Total
16 hrs

First Responder-Operations employees expected to take defensive actions and conduct decontamination

4
hours

First Responder Awareness- those employees that may encounter a hazardous materials emergency and/or conduct “directed self-decon.”

Hazard Communication- all employees

“Who’s gonna do the work?”

Department	Tasks	Comments
Engineering	Decon, spill cleanup, setup, event termination	Generally stable workforce, used to working in uncontrolled situations, good with tools and equipment, often on site 24/7
EVS/ Housekeeping	Decon, spill cleanup, setup, event termination	Often transient workforce, conducts non chemical cleanup as part of normal duties, often on site 24/7
Security	Decon, site control, setup	Often first on scene, will likely be used for site access control, on site 24/7

“Who’s gonna do the work?”

Department	Tasks	Comments
Emergency Department	Decon, triage, patient care	Needed to determine effectiveness of decon, conducts triage of patients, provides ABCs prior to decon, provides patient care to patients after decon, on site 24/7
Laboratory, Pharmacy, Sterile Processing, Imaging	Incidental spill response, technical reference	Site of major chemical use, can be trained for quick response, often good source of knowledge regarding handling of chemicals
Nuclear Medicine	Radiological monitoring, technical reference	Good source of knowledge regarding radiological materials

“Who’s gonna do the work?”

Department	Tasks	Comments
RNs, Medical Assistants, etc. in departments that use chemicals	Incidental spill response, decon	Critical to preventing incidental spills from becoming emergencies, can be used for decon.
Environmental Health and Safety	Incident management, technical reference, liaison	Often a good resource for managing hazardous material emergencies and coordinating with outside agencies

“OK, Whaddatheygonnado?”



S

C

P

D

I

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C

D

N

A

P

D

“OK, Whaddatheygonnado?”

- FRA level
- Defensive Actions

S

I

N

Safety

Isolate

Notify

“OK, Whaddatheygonnado?”

C

I

A

Command

Identify

Action
Plans

“OK, Whaddatheygonnado?”

P
C
P

PPE
Control,
Contain,
Cleanup
Protective
Actions

“OK, Whaddatheygonnado?”

D

D

D

Decon

Dispose

Document

“Hey, what about Terrorism?
Everyone is talking about terrorism.”

- Terrorism is a “menace, with malice.”
 - A **chemical** terrorism event (the “N&C” of B-NICE) is a “Hazardous Materials Incident”
 - A **biological** terrorism event (the “B” of B-NICE) is an “Infectious Disease Outbreak”
 - A **fire or explosion** terrorism event (the “I&E” of B-NICE) is a “Burn and/or Mass Casualty-Trauma Incident”

“But...”

- If you **can't** do the small stuff, you **can't** do the big stuff
- If you **can** do the small stuff, you still **may not** be able to do the big stuff
- If you **can** do the big stuff, you **can** probably do the small stuff

Bottom Line, “What are the biggest challenges?”

- OK, you asked...
 - Respiratory Protection (Respiratory Protection Standard)
 - Time away from work for training (HAZWOPER)
- (All OSHA standards, when triggered, apply)
- These are institutional choices, not insurmountable barriers

WHY WE PLAN!





The End !

Photo courtesy of Robert A, Eplett /oes.ca.

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